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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/571,143

11/27/2006

Andrew Charles Ratcliffe Tyrer

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09/03/2008

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WASHINGTON, DC 20005

EXAMINER

OLSON, LARS A

ART UNIT

PAPER NUMBER

3617

NOTIFICATION DATE

DELIVERY MODE

09/03/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

Office Action Summary	Application No. 10/571,143	Applicant(s) TYRER ET AL.	
	Examiner Lars A. Olson	Art Unit 3617	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 June 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. An amendment was received from the applicant on June 25, 2008.
2. Claims 10 and 11 have been cancelled.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taquino (US 6,695,540).

Taquino discloses a method for making a vortex induced vibration suppression cladding section, as shown in Figures 1-11, said method being comprised of the steps of molding an outer layer, defined as Part #31, that is comprised of a polymeric material incorporating an antifouling material, as described in lines 18-21 of column 5, where said molding is a tubular body which is longitudinally split and deformable, as shown in Figures 3-5, to permit an elongate underwater member, defined as Part #32, to be introduced into it.

Taquino, as set forth above, discloses all of the features claimed except for the step of molding a plastic inner structural layer within said outer layer.

The use of a plastic molded member having inner and outer layers instead of a single layer would be considered by one of ordinary skill in the art to be an obvious multiplication of parts for the purpose of providing said plastic molded member with increased strength.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a plastic molded member having inner and outer layers in place of the single layer molding as disclosed by Taquino for the purpose of providing a method for making a cladding section with increased strength.

5. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taquino in view of Blair et al. (US 6,019,549).

Taquino, as set forth above, discloses all of the features claimed except for the step of molding a cladding section with at least one hollow protruding feature for suppressing vortex induced vibration.

Blair et al. discloses a vortex shedding strake wrap, as shown in Figures 1-3, that is comprised of a elastomeric cladding section, defined as Part #21, that includes at least one hollow protruding strake, defined as Part #37, for reducing or eliminating vibration induced by flowing ocean currents that cause vortex formation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a cladding section that includes at least one hollow protruding feature, as taught by Blair et al., in combination with the cladding section as disclosed by Taquino for the purpose of providing a method for making a cladding section with hollow strakes in order to reduce the overall weight of said cladding section.

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6. Claims 1, 2, 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taquino in view of Inoue (US 5,423,631).

Taquino discloses a vortex induced vibration suppression device, as shown in Figures 1-11, that is comprised of a plastic molding with a tubular portion, defined as Part #11, for receiving an elongate underwater member, defined as Part #32, said tubular portion being split along its length and deformable to permit said member to be introduced into said tubular portion, as shown in Figure 5, said tubular portion also having at its exterior at least one strake, defined as Parts #15-17, to suppress vortex induced vibration.

Taquino, as set forth above, discloses all of the features claimed except for the use of an outer layer incorporating antifouling material.

Inoue discloses an antifouling structure, as shown in Figures 1 and 2, that includes a layer of antifouling material, defined as Part #1, which can be attached to a structural layer, defined as Part #5.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a layer of antifouling material in combination with a structural layer, as taught by Inoue, in combination with the device as disclosed by Taquino for the purpose of providing a cladding section that inhibits the deposition of marine organisms.

7. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taquino in view of Inoue, and further in view of Blair et al.

Taquino in combination with the teachings of Inoue shows all of the features claimed except for the use of a hollow strake.

Blair et al., as previously cited, discloses a vortex shedding strake wrap that is comprised of a elastomeric cladding section, defined as Part #21, that includes at least one hollow protruding strake, defined as Part #37, for reducing or eliminating vibration induced by flowing ocean currents that cause vortex formation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to utilize a cladding section that includes at least one hollow strake, as taught by Blair et al., in combination with the device as disclosed by Taquino for the purpose of providing a cladding section with hollow strakes in order to reduce the overall weight of said cladding section.

Response to Arguments

8. Applicant's arguments filed on June 25, 2008 regarding claims 1-9 have been fully considered but they are not persuasive.

9. The applicant argues that Taquino (US 6,695,540) does not disclose the use of rotational molding to produce a vortex induced vibration suppression cladding section as claimed. The applicant also argues that Taquino and Inoue (US 5,423,631) do not disclose a cladding section that is comprised of an outer layer of anti-fouling material and an inner structural layer.

10. In response to the applicant's first argument, Taquino discloses a method for molding a vortex induced vibration suppression cladding section from a polymeric

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material that incorporates an anti-fouling material. The use of rotational molding of polymeric materials to form tubular structures is a well known and established process in the art. The disclosure by Taquino that said cladding section is produced using a molding process encompasses rotational molding and all other established molding processes. Therefore, for the reasons given above, the rejection of claims 7-9 is deemed proper and is not withdrawn.

11. In response to the applicant's second argument, Taquino discloses a vortex induced vibration suppression device that is comprised of a molded plastic tubular portion that forms a structural layer when fitted around an elongate underwater member. The examiner has relied upon the teaching of Inoue to demonstrate that the use of an outer layer of anti-fouling material in combination with a structural layer is known in the art. Thus, the structural layer as disclosed by Taquino in combination with the outer layer of anti-fouling material as disclosed by Inoue shows all of the features as claimed by the applicant. Therefore, for the reasons given above, the rejection of claims 1-6 is deemed proper and is not withdrawn.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

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mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication from the examiner should be directed to Exr. Lars Olson whose telephone number is (571) 272-6685.

lo

August 28, 2008

/Lars A Olson/

Primary Examiner, Art Unit 3617